Honey Industry.

231 263 438 [134] The only other product of economic consequence is the celebrated Du'an honey. Honey from Jerdan has an even greater local renown but is not produced in such quantities. At places like Tarim it is not considered possible to grow honey owing to the depradations of the Blue-cheeked Bee eater (*Merops persicus persicus*), one of the most common, as well as most beautiful, birds in the Hadhramaut. We did not observe this bird at all in the Wadi Du'an, where it is shot on sight.

231 263 The hives are tunnel-like structures fitted into the walls of the houses, and consist of circular sections about a foot in diameter. In the outside wall is a small hole through which the bees enter and leave the hives. Du'an enjoys two honey crops in a year; that of June, July and August being regarded as the best, for in it the bees collect the honey from the blossoms of the *'elb* trees. The honey obtained during the second crop, from November to March, is gathered from a small bush called *Qaymala*, and while it is highly esteemed it is considered very heating and may not be eaten [843] by pregnant women. If there is much rain during April and May, the bees make a black honey called *helb*, and they are said to grow much stronger, for they consume this honey themselves. The swarming of the bees was thus described by a bee-keeper: A second queen bee, whom they call *ab* or father, sometimes leaves the hive and goes a short distance away followed by some of the others. The bee-owner takes a mat and rolls it up in the shape of a hive, closing one end, and sprinkling inside a perfume of the perfumes used by the ladies. Approaching the swarm, he gently takes the queen in his fingers out of it and puts her into a small cage made for the purpose. The cage is then put inside the rolled mat. An assistant beats a tin or copper tray and the bees leave the place where they have swarmed and come to the queen. The swarm is now carried to a hive, the queen bee and her cage put into the hive, and in go the bees after her.

The bees collect the crop in 12 to 20 days, and when the owner sees the hive is full he fits on more sections until they have finished. Thirty to 40 pounds of honey are collected from a single hive at each crop. The honey is gathered by smoking the bees out from behind. When they have left, the exit hole is stopped up and the honey is taken, one section being left for the bees. In times of drought, honey is put into the hives for the bees to eat. The honey 251 is packed in comb and as liquid. In the former case two sizes of round tins are used, containing 4 lb. and 7 lb. respectively. An inside cover is soldered to the tins in Mukalla. Liquid honey is packed in cases of two kerosene tins. The value of the honey 435 in Mukalla is one rupee a pound. The total production is 20,000 to 100,000 pounds.

000 In view of the great renown which Du'an honey enjoys in South Arabia and the East Indies, and in view of the fact that it is much appreciated by Europeans, I had hoped that there might be

137 *Rakh* (*Salvadora persica* L.) is a very popular fodder with camels
314 and is found in abundance in the Wadi Maseila; it is also fairly
246 common round Du'an but practically non-existent to the north of Shibam. Goats do not eat it. It also provides the Beduins with their favourite toothsticks.

Khuweira, a small plant (*Cassia obovata* Coll.), is very popular with both camels and goats. There are of course many other plants on which they graze.

Manufacturing Industries.

496 Minor Industries include the extraction of simsim oil with camel
262 mills. In Mukalla there is a large oil factory with 31 compart-
249 ments in each of which a camel turns the usual primitive wooden machinery for expressing the oil from sesame seed. The oil extracted by this primitive process is much more popular for food that that extracted by modern machinery. It is considered much
[231] sweeter. The residue forms a cake which is fed to camels.

339 There are kilns for lime-burning immediately to the east of
438 Mukalla and in many other places. In particular most excellent
353 lime is made in Seiyun and Tarim. This is applied as a plaster to the interiors of the houses and polished with smooth flints till it resembles marble.

28 Hides from the interior are tanned in Mukalla but none is exported. At Gheil ba Wazir I saw a leather-worker using Mukalla-tanned skins. Skins are also tanned in Shibam. The dyeing of cloth, weaving, and mat-making are other minor industries. Shihr in particular is well known for its beautiful
323 weaving. There are potteries in many places, and I saw the process
326 in Gheil ba Wazir. There are also good workers in silver at Gheil ba Wazir, Shihr and Mukalla.

Fisheries.

228 The manufacture of fish fodder and manure and the preparation
251 of dried fish is a large industry of the coastal area. From an
262 export point of view, fish products come third in importance. They
231 are :—

438 *Sifa* (fish oil). Not much of this is made in either Mukalla or Shihr. The bulk is imported from the Mahri coast.

Wazif (dried *'aid* and other small fish). A great quantity of this is prepared in Mukalla and still more in Shihr. The sea is alive with these small fish, the catching and preparing of which gives work to many hundreds of fishermen. In both Mukalla and Shihr there are godowns for these fish which are stored before being taken to the interior for manure, camel fodder, or human consumption. The very small *'aid* fish are used for manure only, but the larger ones are eaten uncooked

by men and also serve for fodder. It is sold by *ma'bar*, a basket of about 30 to 40 lb. The price for eight baskets is from one to three dollars.

Hanīt (cooked and dried *tamad* fish). About fifteen to twenty *bahars* of this are made a day in Mukalla and sold for local and up country consumption.

Safīf (dried *tarnak* and *tamad* fish). This used to be made only from the *tarnak* but now includes *tamad* as well.

Lakhm (dried shark). A great deal is prepared in Mukalla and one *frasila* costs one and a half to two and a-half dollars.

Rīsh (shark fins). A certain amount of these are exported to China.

The fish manufactories have been removed from the town of Mukalla, a sanitary measure for which credit is due to Sultan 'Umar. The drying-grounds and godowns for *wazīf* are situated beyond Therb, the camel park, outside the western gate. Here too there are old fish-oil tanks. The drying of fish for human consumption takes place at Al Khalf, east of the town, and here large godowns for storage and export are in process of completion. Dried fish forms a staple article of diet of the population. It is also a valuable manure and a widely-used fodder for animals. The extent of this coastal industry may be judged by the millions of gulls lining the seashore and the ever-pervading smell in the coastal towns.

Mr. Heald, referring to the fish-curing industry, writes " Along the coast in the various villages, a primitive fish-curing industry was carried on for sale in the interior, which consisted merely of digging a hole about one yard deep and half a yard broad, lined with stone; in this, wood was burnt and then the large-sized fish were placed in the hot ashes and covered over and left for 24 hours, afterwards taken out and sent up to the interior for sale. I was informed that the cured fish would keep for a considerable length of time, but, as a word of warning to intending travellers in this country, I strongly advise them not to allow any of their luggage especially bedding to be put on the same camel carrying the fish, as the smell was abominable and tainted everything it came into contact with. The Beduins on the journey fed their camels with the small sun dried fish and also partook of the same themselves without any attempt at cooking."

Visit of Agricultural and Geological Experts in 1919.

Agricultural Report.

At the request of the Sultan, then Sir Ghalib bin 'Awadh, K.C.I.E., experts were obtained from Egypt to examine and report on the agricultural and mineral possibilities of certain parts of his territory